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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,979	07/10/2001	Yoshimi Ishibashi	SAE-024	6945

20374 7590 05/21/2003

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WASHINGTON, DC 20006

EXAMINER
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DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/900,979

Applicant(s)

ISHIBASHI ET AL.

Examiner

Tamra L. Dicus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2003.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 1,6-14,16,19,20 and 25-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6-14,16,19,20 and 25-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_      6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

The rejections of the prior Office Action dated 10-24-02, Paper No. 4, are withdrawn. The Examiner acknowledges canceled claims 2-5, 15, 17-18, and 21-24.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,6-14,16,19,20 and 25-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,139,065 to Washburn et al. in view of USPN 6,199,911 to Isherwood et al., USPN 6,028,028 to Nitta and further in view of USPN 5,501,938 to Ellis et al.

3. Washburn teaches a security paper with a filament bonded and embedded in a paper support. See col. 4, line 26. Washburn teaches the use of adhesive on security filaments such as synthetic thread, which may be fluorescent, in order to adhere to paper at col. 1, line 64-66. See further col. 5, line 65-col. 6, line 10, and lines 33-38. Also Washburn teaches calendaring rolls may be used to apply pressure and heat to the filaments to laminate it to the paper at col. 2, lines 1-11. At col. 3, lines 42-50, Washburn discloses suitable adhesives may be used such as ultraviolet, water base, or pressure-sensitive adhesives, all of which are equivalent to in water or organic solvent mediums for forming adhesive. Washburn teaches filaments may have different colors, widths, shapes or any combination of the same to further enhance security features of the security paper at col. 6, lines 50-54. Such security filaments and threads are ribbon-shaped having the structural requirements as recited in amended claim 1.

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4. Washburn is silent to the thickness of the support and thread, while Washburn does mention at col. 4, lines 29-30, paper thickness may be adjusted.

1. Isherwood discloses a variety of security elements (see Figures) applied to a security document which may be metallized or colored. Isherwood discloses it is well known to color, coat, metallize, and vapor deposit metal such as Al or another metal onto security elements such as thread or strips (ribbon) made of synthetic film such as polyester at col. 1, lines 23-25, lines 48-50, col. 4, lines 1-15, lines 38-45 and col. 2, lines 40-55. Isherwood further teaches a thread or security element having a width of at least 0.5 mm, which falls in the range of 0.3mm to 20 mm as claimed in claims 1, 9 and 28; the thickness of 10 to 80 microns is inherent since width multiplied by width equals thickness. Addressing the ratio of thickness of the paper to the security element of synthetic film and metal layers of claims 1, 7, 20, 26, it would have been obvious to one of ordinary skill in the art to produce a thickness ratio of paper to coated security thread/element, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The thickness of each (paper and security element) determines what the ratio will be. Thickness is optimizable - the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render Applicant's claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. Moreover, Nitta teaches a thermosensitive (heat-sensitive) recording paper comprising a paper support and a recording layer of either woven or nonwoven fabric formed on the paper layer, where the support has a security element embedded within, such as a thread/fiber (thread-shaped), where the recording layer has a thickness between 30 to 300 micrometers, the paper support has a thickness between 80 and 500 microns, and the synthetic threads are from 40

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to 150 denier. See col. 2, lines 25-63, col. 3, line 35 and 61, col. 5, line 66, col. 7, lines 43-50, col. 8, line 31, and Table I. Regarding claim 20, Nitta teaches a paper support having between 20 and 300 microns at col. 7, line 43 and a thread diameter of 40 to 159 denier at col. 3, line 61.

5. Hence it would have been obvious to one of ordinary skill in the art to modify the paper of Washburn to include various ranged thickness of paper and thread since Nitta teaches the ranges are conventional to a security paper as cited above.

6. Regarding claim 11, how the adhesive layer contacts the paper support, e.g. "by contact...and water when the element...is embedded...during paper making...heat applied...", these involve process limitations which are given no patentable weight.

7. Washburn does not state the application amount of  $1 \text{ g/m}^2$  to  $10 \text{ g/m}^2$ . However, it would have been obvious to one of ordinary skill in the art to produce a coating application amount of  $1 \text{ g/m}^2$  to  $10 \text{ g/m}^2$ , since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The amount of coating directly effects the thickness. Furthermore, Nitta teaches in Example 6 a water-based coating fluid applied in an amount of  $5 \text{ g/m}^2$  and then dried, then supercalendered to obtain a thermosensitive recording sheet.

8. Washburn does not state the paper has a recording layer that is heat-sensitive with a binder and electron-donating compound. However, Ellis teaches ablation transfer recording where it is known to include a binder and electron-donating compound such as at least one hydrogen atom donating material and binder at col. 9, lines 16-22. Hence it would have been obvious to one of ordinary skill in the art to modify the paper of Washburn to further include a

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recording layer having a binder and compound as recited for conventional usage. Ellis teaches such layer is suitable for all types of supports of various thicknesses at col. 10, lines 13-30.

9. Regarding claim 19, Washburn does not teach an intermediate-coating layer which is in between the paper and recording layer. However, Nitta teaches an intermediate-coating layer which is in between the paper and recording layer, that comprises a vinyl chlorine-vinyl acetate copolymer, which is equivalent to hollow organic particles, or may comprise a pigment such as titania at col. 12, line 60 and col. 13, lines 57-58. See further Figure 1 and col. 13, line 13.

### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. Washburn is still relied upon as Washburn teaches recording paper and the process of making it. Accordingly, Isherwood, Nitta, and Ellis all teach recording paper and modifications to paper for security or aesthetic reasons. Hence, motivation still exists.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

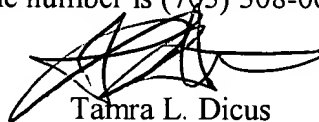
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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is (703) 305-3809. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8329 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Tamra L. Dicus  
Examiner  
Art Unit 1774

May 16, 2003



**B. HAMILTON HESS**  
**PRIMARY EXAMINER**